TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

STATE OFFICE STILLWATER, OKLAHOMA 74074

PLANT SCIENCE TECHNICAL REFERENCES - FOR IN SERVICE USE ONLY

TECHNICAL NOTE - Conservation Plant Materials OK-7

March 12, 1971

Re: Guidelines for Selection of Stock, Making Cuttings, Storage, Planting, and Management for Sandbar Willow Salix interior

Selection of Area: Select a suitable thicket of sandbar willow that is not damaged by livestock, rodents, or disease. The area should be easily accessible and access prior arranged. Be certain of the identity of sandbar willow and that the thicket is not contaminated with other willow species.

When to Make Cuttings: Select whips 1/4 to 3/4 inch in diameter preferably from 1- or 2-year-old wood. Cut whips in the field about 4 to 6 inches above the ground, prune side branches, crop the top down to desired size, and place in uniform ricks for ease in handling with the tops all in one direction. The stock can be further processed in the field or hauled to a working shed for convenience.

Length of Cutting: Make cuttings from the whips into uniform 8- to 10-inch lengths using a sharp instrument to avoid bruising, peeling, or otherwise damaging the stock. Discard all peeled or bruised cuttings. Arrange the cuttings into bundles of 25 for ease in handling and counting. Assemble cuttings into bundles with tops all in one direction and tie with a soft cord to prevent injury to the bark. The cuttings are now ready for storage.

Method of Storage: Storage may be in a pit, trench, bed, or refrigerated cold storage. Storage temperature should be about 5° centigrade (C.) or 42° to 45° Fahrenheit (F.). Regardless of storage method, the bundles should be inverted (bottom end up, top end down) and placed on end in a vertical position.

Pit, Trench, or Bed Storage: Excavate the storage pit, trench, or bed to a depth of 20 inches. If the soil at the bottom of the trench is heavy, place about 2 inches of sand in the bottom to allow for drainage of water from around the cuttings. Cover with friable soil, soil and sand, or a mixture of soil, sand, and peat moss. Add water to the medium around the cuttings to keep them moist. Cover the cuttings with 8 to 10 inches of damp soil.

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Check occasionally to avoid desiccation and moisten as necessary. The temperature of the cuttings should be fairly constant in the prescribed 42° to 45° F, range. Remove for planting as needed and complete planting by time buds of the stored cuttings begin to swell.

Refrigerated Cold Storage: Place the cuttings bottom end up and top end down in vertical position, usually in tiers with a thin layer of moist peat moss between tiers, cover entire area with moist peat moss, and regulate temperature between 42° to 45° F. Moisten the peat moss as needed. Refrigerated storage at the above temperatures will keep the cuttings dormant longer and extends the planting season by about 30 to 40 days over pit or bed stored method.

<u>Planting</u>: Calloused cuttings may be planted in a furrow, trench, or dibble hole. Place the calloused cuttings right end up (the position of original growth) at the edge of the plow furrow or trench. Place soil around the cuttings and pack leaving 1 or 2 buds above the ground surface this is usually about 1 1/2 to 2 inches of stem above ground). If individual dibble holes are made for each cutting, leave 2 inches protrude above the ground and firm soil into place. Do not force calloused cutting into the soil because of possible peel damage to the back that results in mortality.

<u>Care after Planting</u>: Sandbar willow requires permanently moistened soil for optimum growth and survival. Plantings in less than moist conditions will require the addition of water in amounts and frequency to insure moist soil conditions for as long as necessary or until the natural water level raises to keep the soil permanently wet. Dry soil conditions during establishment will result in high mortality.

<u>Management</u>: Protect plantings of sandbar willow from grazing, fire, traffic, and other physical damage. After cuttings are well rooted, fertilizer will encourage growth and spread. Use a 10-5-5 fertilizer at about 500 pounds per acre rate or the actual amount recommended on the basis of a soil test.

Management of Cutting Thicket: When there is a perennial need for sandbar willow cuttings, select at least two separate thickets and harvest on alternate years. Old established thickets will sprout profusely when top growth is cut off 4 to 6 inches above the ground during the winter. The growth the following season will be rapid, fairly thick in numbers, fairly straight with a minimum of side branches, and usually in desirable size and length too facilitate harvest the following winter.

Prepared by: Robert D. Lippert
Plant Materials Specialist

/s/ N. E. Rowley
N. E. Rowley
State Resource Conservationist